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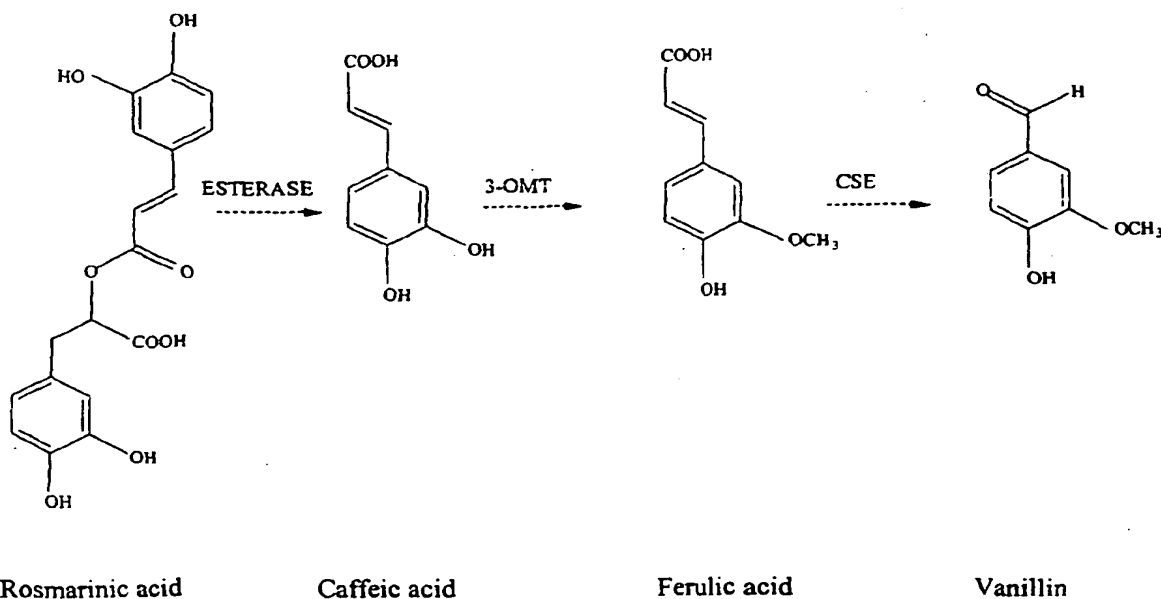
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(54) Title: PRODUCTION OF VANILLIN IN MICROBIAL CELLS



(57) Abstract: Transgenic microorganisms that produce vanillin when provided with caffeic acid or an esterified or other derivative thereof are disclosed. The organisms are transformed with expressible nucleic acid sequences encoding (1) a 3-O-methyltransferase, preferably from a plant source, which converts caffeic acid to ferulic acid and (2) either a eukaryotic (preferably plant) non-oxidative chain-shortening enzyme or a bacterial CoA ligase and enoyl-CoA hydratase/lyase enzymatic system, either of which converts ferulic acid to vanillin. Methods of making vanillin in the transgenic microorganisms are also disclosed.



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